

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

ALONZO BENTON,	:	
Plaintiff,	:	
	:	
v.	:	CIVIL ACTION
	:	No. 19-109
CSX TRANSPORTATION	:	
Defendant.	:	

McHUGH, J.

June 16, 2023

MEMORANDUM

This case is brought by a pedestrian who fell at a railroad crossing owned by CSX Transportation (“CSX”). Defendant moves to preclude Plaintiff’s expert Dr. Andres Calderón from testifying at trial, arguing that Dr. Calderón’s opinions are inadmissible under Fed. R. Evid. 702 and *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 589, 597 (1993). It further moves for summary judgment, arguing that without expert testimony, Plaintiff’s claim fails. Both motions will be denied.

To be admissible, expert testimony must be relevant, reliable, and helpful to the factfinder’s evaluation of the evidence. *See Daubert*, 509 U.S. at 589, 597 (1993). To be reliable, an expert’s opinions must be based upon valid reasoning and a reliable methodology. *Daubert*, 509 U.S. at 592; *see also In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 742 n.8 (3d Cir. 1994) (“*Paoli II*”) (noting eight factors that courts use to guide their analysis). CSX claims that Dr. Calderón’s opinions must be excluded because his findings are not based upon a valid and reliable methodology.

CSX primarily argues that Calderón’s opinions must be excluded because he fails to supply any standard for assessing when a slip differential creates an “unreasonably hazardous” condition. See ECF 52-1 at 9. In support of this argument, CSX maintains that Dr. Calderón must first specifically identify an accepted minimum standard for slip resistance for a given type of surface for his opinions to be admissible. *See, e.g., Nagy v. Outback Steakhouse*, No. 19-18277, 2020 WL 5105196, at *2 (D.N.J. Aug. 31, 2020) (expert opined that a dynamic coefficient of friction of 0.42 represented standard of care for hard surface flooring); *Pugh v. U.S. Postal Serv.*, No. 03-993, 2005 WL 8176140, at *4 (D.N.J. July 28, 2005) (finding expert testimony opining “that a slip resistance of 0.50 is widely recognized as safe for walkways” to be reliable in a slip and fall case). But the hazard Plaintiff asserts here is not a generally unsafe condition, but one that arises out of a *relative* difference between two types of surfaces – one unexpected by a pedestrian – that in turn affects gait and balance. The site of the fall is a grade crossing where the surface transitions from asphalt to metal to concrete. Using standard testing techniques, Dr. Calderón determined that the metal upon which Mr. Benton fell was 32.1% less slip resistant than the cement of the sidewalk, and 26.7% less slip resistant than the asphalt. At his deposition, Dr. Calderón testified that a *change* in slip resistance of greater than 25 to 30 percent “will be a significant change for the person,” even though he couldn’t establish the minimum level of change giving rise to a hazard. *See* Def.’s Ex. C., Calderón Dep. at 137:7-140:6.¹

CSX asserts that this “subjective belief and unsupported speculation” is insufficient basis to support his opinion that the slip differential at CSX’s crossing was unreasonably hazardous. ECF 52-1 at 11 (citing *Daubert*, 509 U.S. at 590). But principles of common law negligence

¹ He separately opined that such a change might first become noticeable as low as 5%, distinguishing between perceptible change and significant change. Calderón Dep. at 137:14-23.

control this action, and it is for the jury to decide whether the risk identified by Calderón is meaningful or inconsequential.

CSX further argues that Dr. Calderón’s “expectation of frictional resistance” hypothesis has no support in peer-reviewed literature, and this lack of peer-reviewed support “is further evidence that Dr. Calderón’s report is not ‘good science’ and the product of a reliable methodology, and that he should be precluded from testifying at trial.” ECF 52-1 at 14.

Plaintiff responds by noting that the broad premise underlying Dr. Calderón’s opinion – that a greater percentage difference in slip resistance increases the likelihood of a slip and fall – is well-documented in literature. Indeed, at least one publication that discusses this principle was issued by the U.S. Department of Transportation, as cited in Calderón’s original March 2020 expert report. *See* Pl.’s Ex. E at 4, ECF 54-1 at 53 (March 2020 report); Pl.’s Ex. F at 15, ECF 54-1 at 64 (DOT report). In discussing pedestrian “expectancy,” it stated:

Unexpected changes in surface friction, the "banana peel" experience, or the sudden patch of ice, are commonly recognized as a cause of slipping accidents. Differentials in floor finishes, even where the floors have relatively high surface friction values, have been found to cause falls. Changes in floor finishes at points where there is also a change in a pedestrian's movement direction increase the susceptibility to falls, because of the shift in balance required by the turn. Surprisingly, workers in a factory having a uniformly "slippery" floor experienced relatively few falls because of acclimation to the low surface friction.

ECF 54-1 at 64.²

Dr. Calderón also testified as to how his experience as a biomechanical engineer, one who has evaluated fall mechanisms, albeit in a forensic context, shaped his opinion, and Rule 702 explicitly recognizes experience as a basis for expert testimony.

² The report goes on to observe that the uniform height of stairs embodies the same principles, nothing that one’s instinctive “pacing pattern” can become “ingrained” such that “even relatively small variations in riser height can result in a misstep.” ECF 54-1 at 64.

“The test of admissibility is not whether a particular scientific opinion has the best foundation or whether it is demonstrably correct” but is instead “whether the ‘particular opinion is based on valid reasoning and reliable methodology.’” *Oddi v. Ford Motor Co.*, 234 F.3d 136, 145-46 (3d Cir. 2000) (quoting *Kannankeril v. Terminix Int’l Inc.*, 128 F.3d 802, 806 (3d Cir. 1997)). Here, Plaintiff has shown that Dr. Calderón has a relevant opinion, based upon a recognized phenomenon in biomechanical engineering – one that comports with common sense, and is confirmed by his professional experience. That is sufficient.

Finally, CSX contends in a footnote that Calderón’s opinions should also be excluded because of his lack of clarity regarding where Plaintiff slipped and was injured. But based on the exhibits provided it appears that Calderón corrected what may have been an initial error, and it is by no means clear that such an error would invalidate his opinion. That issue is one for cross-examination. *Kannankeril*, 128 F.3d at 807 (holding that “[t]he analysis of the conclusions themselves is for the trier of fact when the expert is subjected to cross-examination”).

As to the defense motion for summary judgment, it was contingent upon preclusion of Dr. Calderón’s testimony. Absent such preclusion, that motion also fails.

/s/ Gerald Austin McHugh
United States District Judge